Development Confined to lification and Standardseven-passenger touring and all chaufization of Construction

WANT TO PUBLIC NEEDS

oNG about this season of the year one about this season of the year when the annual motor show lends y emphasis to motorcar discustrating query. "What changes, if will future bring forth in design will future bring forth in design motors, turbines, alloy steels, fuels, body lines, and innumerable will find the find els, body lines and innumerable items of varying importance all of engineering opinion over the the motor-owning public.

naturally enough, the public en-e procedure sufficiently to become procedure sufficiently to become ier to the discussion whenever herever the opportunity exists. Intly, in the make-up of every there is just enough curiosity al such action. Every motorear at some time or other, has wonwhat the creations of five or ten the startling changes that made in the last ten years. s wondered whether or not it be possible for the coming decade w similar progress.

personal opinion is that it will I am of the belief that most of relopment work in the automobile

during the coming decade will be largely to a simplification and ardization of construction, with a toward securing greater endurance from repairs and adjust-

motorcar each year is becoming ter in t ument of utility—a betmore generally recognized ser-public needs, and by reason of fact its ability to do its work with inimum of expense is continually ng more and more important.
was a time when every owner
d a certain amount of difa certain amount of dif-operating his car. He disthis difficulty when he made when it materialized. That time, sever, is gone. Today the average torear owner objects strenuously if led upon to humor or fuss with his nd is the subject of much dis-tment if for any reason his car not at his call whenever be needs This change in the public's point riew and its unwillingness to toler-anything but thoroughly justifiable alls and adjustments will probably the greatest single influence upon design of the coming years. aking in prophesying the trend of aking in prophesying the trend of orear design is that which involves motor proper. If the subject had up for discussion last summer, in the shortage in gasoline was so be the necessity for stringent econuld probably have strongly in-the discussion. Now that the passed again (and the word is used advisedly), the cry for onary fuel economy has sub-Whether or not the present internal combustion engine will ly be rendered obsolete by a reity of fuel is a question that no can answer with any material as-

OTTER-DIESINGER CO. **EXHIBITING FIAT CARS** 

Fours" and One Six-Cylinder Models Displayed cars in their latest models are hibited at the show by Potterger Motor Company, 2207 Chest-treet, this being one of the two

makes of cars exhibited. It is in the largest automobile factory ope, at Turin. Italy. manufacturer brings out three the 501, a lightweight small inder chassis; Model 505, with er four-cylinder motor, and Model a six-cylinder motor mounted 136-inch wheel-base chassis. The is length of Model 505 in 13.6 feet that of Model 501 is 12 feet. The car is light, fast and easy to and intended for general service. Is exceptional qualities of comfort, all the control of the con lity and endurance and all of the rements found on the bigger cars. aedium-sized car has plenty of roominess, and is available for variety of uses, being elegant variety of uses, being elegant, able and fast, and is equally for city or open-road use. and finish, with a flexible, relia-high-powered motor. It includes port type, with a shorter wheel-bely lighter weight, inclined steering

and streamline body, being ideal g-distance touring or high-speed

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Open Evenings During Automobile Show Week!

A Show by Itself-Tremendous Display Rooms!

A good machine

at the very lowest price

that's what you assure yourself by selecting the

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of Used Cars in the United States!!

Yourself Auto Satisfaction."

L-Head Type

feur-driven closed cars. The engine is six-cylinder of the most improved L-head type, with full inclosed valves and detachabl cylinder

WALTER G. ANTHONY
Manager Packard Motorcar ompany, of Philadelphia

MALTER G. ANTHONY
Manager Packard Motorcar ompany, of Philadelphia of the intake manifold intended to break

ands at this time to crack the WILLS ST. CLAIRE CAR IS

Overhead Valves Used in Eight-

Cylinder Motors The Wills Sainte Claire, featured as the "Mo-lyb-den-um" car, because of the character of the steel used in its construction, is made in one chassis construction, is made in one chassis size of 121-inch wheelbase, with eight-cylinder V-type motor, using over-head valves and camshafts.

The stroke is four inches and the tire and fuel economy

he brake test horsepower is sixty-five. The car is unique in many respects in design, material and workmanship. The power plant is supported in the frame by four arms, cast integral with the upper half of the crank case; the rear arms being bolted rigidly to the frame, while the front arms are supported between leaf and coil springs, providing flexibility and even distribu-tion of weight. Duplex carburetor is used. The body types include five-pas-senger touring, four-passenger roadster (with two-passenger extra folding scat in the rear), a luxurious seven-passenger sedan equipped to the last detail inside for convenience and a fourpassenger coupe, an extra front seat folding under the cowl.

CUSHING RESIGNS FROM HUDSON MOTORCAR CO.

To Enter Advertising Field in Buffalo February 1

and Essex Motors, has resigned to enter the advertising agency field with the firm of Barton, Durstine & Osborn, Inc. He will join the Buffalo office about February 1.

Mr. Cushing has been active in newspaper and advertising work in Detroit for more than twelve years. For the last five years he has been with Hudson. Prior to that he was advertising manager of the Federal Motor Truck Com-pany, editor of the Detroiter, at the Detroit Board of Commerce, and for three years with the editorial depart-ment of the Detroit News. He has been active in all advertising movements and seven-passenger touring, four-passenger since 1919 a member of the Board of tourist, especially equipped, standard Directors of the Audit Bureau of Circulations.

MODIFICATIONS ON KING

Only One Chassis Design, Having

modifications straighter and smoother tendency, with-out losing those conservative elements that have characterized this car for several years. There are also minor mechanical changes, more in the way of refinements than great changes. Only one chassis design is made, having 120-inch wheelbase and using

the King designed and built eight-cyl-inder motor, V-type, the motor and transmission being built in unit. The motor develops sixty horsepower. The motor develops sixty horsepower. Some mechanical features are King-Atwater improved ignition, Ball & Ball carburetor, designed especially for the King, and King-Westinghouse starting nd lighting.

BIDDLE CARS ATTRACT

Built to Idea of Ultra-Quality In Moderate Size

Biddle cars are built to the idea of Biddle cars are built to the idea of ultra quality in moderate size. They are of unusually attractive design, low hung, snappy in style and furnished in a variety of colors, with rich, elegant upholstery.

The wheelfase is 121-inch and they are sturdy and well designed, equipped with a powerful Buda motor, 4%-inch bore and 5%-inch stroke, glaimed to give unusual gasoline and tire mileage.

give unusual gasoline and tire mileage It comes in a two and five passenger open type and coup of exclusive design. type and coupe, the bodies being

## FEATURES IN CHALMERS PACKARD TWIN SIX Engine Is Six Cylinder, of Improved REMAINS THE SAME

omy Claimed for Single Six Model

DESIGNS BODY

THE Packard is represented by two L types of cars—the well-known twin | six, the twelve-cylinder model introduced in 1915 and the single six,

anism of the car and are averse to radical changes.

There are seven standard body designs on the twelve, the seven-passenger touring, five-passenger phaeton, two-passenger runabout, five-passenger coupe and duplex coupe, seven-passenger ger sedan and duplex sedan, and the limousine.

There are seven standard body designs on the twelve, the seven-passenger touring, roomy two-passenger roadster and a five-passenger sedan, delightful examples of designing and finish. UNIQUE IN MANY WAYS ger sedan and duplex sedan, and the mousine.

In mechanical design the twin six is In mechanical design the twin six is unique, its multiple-cylinder construction with overlapping power impulses providing utmost balance, smoothness and flexibility.

The new single six represents the culmination of an ideal of Packard engineers for a small, light, mediumpriced car of high quality construction. It is claimed to be giving exceptional tire and fuel economy.

ore three and a quarter inches and ENGINE DISTINGUISHING FEATURE ON LEXINGTON

> Seven Body Types Shown on Various Chassis

The Lexington is made in several chassis sizes. All use the new Ansted engine, six cylinders, with 3¼-inch bore and 4½-inch stroke, developing seventy horsepower. The engine is the big distinguishing feature of this car. It is of the overhead-valve type with automatically controlled bearing cooling and lubricating system, large- crankshaft, Moore multiple exhaust system and Lexi-gasifiers.

The Moore multiple exhaust uses separate exhaust lines from each group

of three cylinders so no two cylinders are exhausting into the same manifold at the same time. Only two gears are used on the motor, making for quiet

operation.

The body/types on the various chassis include: Princess, model S. five-passenger sedan; Genteel Sedan. George W. Cushing, advertising mannger of the Hudson Motor Car Company
four-passenger model T; Salon, model
T, seven-passenger sedan; model T
Sadan, seven passenger; Suburban Sedan, seven passenger; Model T Roadster and the Lark, a new body brought out last summer on the 122-inch wheelbase chassis.

> DORRIS CAR FURNISHED IN A VARIETY OF MODELS

Special Four Equipped With Aluminum Individual Steps

The Dorris is furnished in a variety of open and closed models, including a coupe and special custom-built sedan.

The big touring car is upholstered in hand-buffed leather and equipped with Disteel wheels and nickeled radiator and

amps.

The special four is a standard body Ine special four is a standard body equipped with aluminum individual steps in place of running boards, has Disteel wheels with a spare wheel carried on either side, a trunk rack in the rear and nickel-plated guard standard body equipped with aluminum individual steps in place of running boards, has Disteel wheels with a spare wheel carried on either side, a trunk rack in the rear and nickel-plated guard standard body

EARL IN FOUR BODY TYPES

New Car Has Several Distinctive Features

The new Earl car, represented here by Earl Philadelphia Motor Company, 235 North Broad street, is one of the new cars of the year, making its first It comes in four body types—roadster, touring, sedan and brougham—all mounted on one chassis of 112 mounted on one chassis of 112-inch wheel sase. The bodies are all of at-tractive design and embody several distinctive features generally found on

MODELS 75 AND 55, BOTH LAFAYETTE SHOWN IN SIX BODY IN SIX BODY TYPES

Principal Changes in the 75 Are in All Erected on One Chassis of 132the Power Plant

The Chalmers comes in two chassis sizes—117-inch wheelbase for the road-ster, five-passenger touring coupe and seed and 122-inch wheelbase for seven-passenger touring and all changes.

The Chalmers comes in two chassis in two chassis with 132-inch wheelbase for the principle changes in the 75 ard in the power plant, the layout of the chassis being the changes in the 75 ard in the power plant, the layout of the chassis being the changes in the 75 ard in the power plant, the layout of the chassis being the changes in the 75 ard in the power plant, the layout of the chassis being the changes in the 75 ard in the power plant, the layout of the chassis being the changes in the 75 ard in the power plant, the layout of the chassis being the changes in the 75 ard in the power plant, the layout of the chassis being the changes in the 75 ard in the power plant, the layout of the chassis being the changes in the 75 ard in the power plant, the layout of the chassis being the changes in the 75 ard in the power plant, the layout of the chassis being the changes in the 75 ard in the power plant. plant, the layout of the chassis being sine, the extreme dimensions being 16 plant, the layout of the chassis being much like previous practice. The new power plant is an L-head six-cylinder unit, with inclosed valve and rigid trankshaft and crank case.

The valves, carburetor and exhaust pipe, with the muffler, are moved from the right side to the left, involving a reparation of the starting motor.

The congine is eight cylinder. V

other changes noted include a longer stroke than in model 47, a four-blade cooling fan, a new arrangement of exhaust manifold and exhaust pipe, the use of chain drive for the camshaft, etc.

Closed Cars

base, and mounted with four body types, namely, four-door five-passen-ger sedan, three-passenger coupe, fivepassenger touring and two-passenger

The open models have wood wheels with steel felloes and the closed cars are equipped with disc wheels. Tires are 32 by 4 cord. are 32 by 4 cord.

The engine is four-cylinder L-heads type, thirty-thirty-five horsepower and has, three-point suspension. This year all four cars have been greatly improved. The sedan and coupe bodies are of the low, substantial custombuilt type, beautifully designed, with latest design of curtained windows.

These cars are equipped with regu-These cars are equipped with regu lated heater, anti-rattlers and weather stripping around the doors and win-dows. The addition of disc wheels gives these closed cars the appearance of

The engine is eight cylinder, V shape, developing more than 100 horse-power. The cylinders are 3¼-inch bore by 5¼-inch stroke, cast in blocks of four, cylinder heads being removable. A five-bearing crankshaft 2¼ inches in diameter, is used.

NO CHANGES IN FORD

Continue in Standardized Form of 100-Inch Wheel Base

Ford cars continue in their standard-ized form on a 100-inch wheelbase chassis, and using their well-known motor. It comes as a touring car, run-

about, coupe or sedan.

This manufacturer lays much stress ON DODGE FOUR TYPES on quantity production, depending upon absolute accuracy in the manufacture of each individual part in the car, conforming to definite specifications. The touring car and runabout are furnished with Ford starting and Dodge Brothers make only one lighting systems as an option. The closed chassis design, with 114-inch wheel- models include the starting and lighting system as standard equipment.



ANNOUNCEMENT



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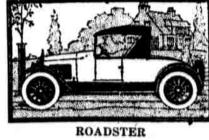
National Motor Car & Vehicle Corporation Philadelphia Branch 675 N. Broad Street, Philadelphia, Pa.

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STEARNS NOW THE LOWEST-PRICE QUALITY CAR!

Five-Passenger F. O. B. Factory \$2250 With Cord Tires Effective January 16, 1922







HE price was advanced only once during the war. This is now all taken off and more, too, considering the added quality and improvements that we have put on since that time. We are not burdened with high financing, etc., and our extremely low overhead and manufacturing methods permit us to furnish this unequaled value.

5-Passenger ..... 3-Passenger ..... Coupe Brougham and Sedan..... Limousine, Town Car and Landaulet Brougham .....

A record of dependability covering TWENTY-FIVE YEARS not paralleled by any. BUILT ENTIRELY WITHIN OUR OWN FACTORY. Stearns is the pioneer manufacturer of Knight type motors

in this country and has always led in high-grade motor-car design and construction. Stearns is truly the ULTI-MATE CAR. The F. B. Stearns Co. Cleveland, Ohio

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Romon System Eliminates Oil and Grease Cups

and coupe.

The manufacturers lay special stress on the strength of the car throughout, including the frame and cross members,

yet without unusual weight. One of the distinctive features that cylinder cype, 31/2-inch bore and 5-inch ande such a hit a year ago when first stroke, thirty - five horsepower actual

ster; five-passenger touring, a sedan permits the Jubrication of the entire chassis in five seconds by the operation of a small lever in the floor, without leaving the seat or soiling the hands. The motor is the overhead valve four-

## Announcing New Series Chalmers Six \$1295



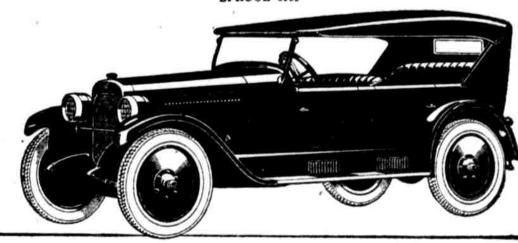
The first product of the new Chalmers organization-the new series Chalmers Six-embodies, we believe, a greater advance than ever before registered in those splendid qualities which distinguish the six as a type.

Until a man has had the thrill of driving it, he has not realized the six possibilities which a solid year of engineering has brought forth in this fine car.

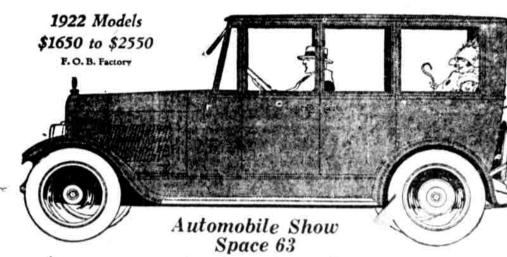
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CHALMERS



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Anderson now means motor car excellence—the Anderson Coachbilt Six. Its mechanical perfections such as Continental Red Seal Motor, Borg & Beck 10-inch Clutch, etc., are fairly overshadowed by the excellence of its coachwork.

We invite you to view the closed models now on our floor. You will appreciate the graceful lines, the superb finish and beautiful colorings. Above all else, though, the prices will surprise you.

HENRY H. STEACY CO. 723 North Broad Street

POPLAR 5311



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